

Common Factors

Date: _____

Factoring - expressing a polynomial as a product of two or more polynomials.

Factoring a polynomial is the reverse process of expanding

EX: **“Expanding”**

$$4x(3x - 5) = 12x^2 - 20x$$

“Factoring”

To Common Factor:

- Find the GCF of all the terms
- Write the GCF as the first factor outside a set of brackets
- Divide each term by the GCF, writing the result inside the brackets.

EX: A. $3x - 27$ B. $15x^3y - 25xy^2$

C. $42x^3y^4 - 14x^2y^7 + 56x^5y^5$

Binomial Common Factoring:

EX: A. $5x(x - 3) - (x - 3)$ B. $2x(3x - 2y) - 5(2y - 3x)$

Common Factoring by Grouping:

Some polynomials do not have a common factor in all their terms. These polynomials can sometimes be factored by grouping terms that do have a common factor.

EX: A. $mx + ny + nx + my$

 B. $10x^2 + 3y - 5xy - 6x$

 C. $3ab - 20cd - 15ac + 4bd$